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## 長距離 AD-HOC 行動通訊寬頻之應用

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### 摘要

個人行動多跳網路的研究已經歷多年，包括節省行動多媒體平臺能源、最佳化路徑、點對點個人行動通訊、點對多點個人行動通訊、個人行動多跳網路與各個種蜂巢行動通訊間在網路層和媒體存取控制層的整合等等，個人行動多跳網路始終不具備完整的移動性，以及移動節點最佳化路徑，隱藏節點對高速行動多媒體平臺的幹擾始終沒有好的通訊解決方案。本論文提出實體層的數位展頻調變方法，結合後第三代行動多媒體通訊的方法，配合正交分頻多工信號處理的技術，與實體層電磁波輻射場的變化，提高跨越多層的整合設計，提高系統穩定性，使個人行動多跳網路邁向長距離寬頻無線通訊。

關鍵字：後 3 三代;正交分頻多工

# **The Promising Long Distance Multipoint AD HOC for a Wideband Application of Communication with Wireless Mobile Station**

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## **Abstract**

To research and design by the AD HOC personal networks which provide such as saving power consumption for desktop or cell phone ,optimized routing ,peer to peer communication integrated fixed and wireless network ,single point to multipoint mobile multimedia communication ,interoperated with cell communication between physical layer and multimedia access control layer, and so on ,have been made from past twenty ten years. Impractically AD HOC personal networks have no good performance to increase throughputs in which well mobility, optimal routing of mobile node and hidden node over high speed user with server interference always affecting the overall system; this article proposed a promising technology that combines digital modulation with spread spectrums communication and beyond 3G multimedia communication, matches orthogonal frequency divided multiplex with digital signal process chips and inter-antenna fading on the physical layer. Our novel proposal designs integrate from L1 to L2 layer increasing performance and stability on the AD HOC personal networks taking a cost mobile platform, a long distance broadband wireless communication.

Key words : AD-HOC;Beyond 3G;

Orthogonal frequency divided multiplex